Through this unit the lessons build towards several Performance Expectations in the Next Generation Science Standards (NGSS) as well as the Common Core State Standards for English Language Arts (CCSS ELA). It is important to remember that the lessons cannot be taught in isolation or the standards will not be addressed. Although the CCSS ELA standards cited here are at the second grade level, the anchor standards from which they were developed can be found at all grade levels.

**Next Generation Science Standards**

* **K-2-ETS1-1**. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
* **K-2-ETS1-2**. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
* **K-2-ETS1-3**. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.
* **2-PS1-1**. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
* **2-PS1-2**. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.\*

**Common Core State Standards in English Language Arts**

*Literacy*

* **CCSS.ELA-Literacy.RL.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
* **CCSS.ELA-Literacy.RL.2.2** Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.
* **CCSS.ELA-Literacy.RL.2.3** Describe how characters in a story respond to major events and challenges.
* **CCSS.ELA-Literacy.RL.2.7** Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.
* **CCSS.ELA-Literacy.RL.2.9** Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures. ***To address this standard the Teacher Tip on page 59 has guidance regarding reading versions of the “Three Little Pigs.”***

*Informational Text*

* **CCSS.ELA-Literacy.RI.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
* **CCSS.ELA-Literacy.RI.2.2** Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
* **CCSS.ELA-Literacy.RI.2.3** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

*Writing*

* **CCSS.ELA-Literacy.W.2.8** Recall information from experiences or gather information from provided sources to answer a question.

*Speaking and Listening*

* **CCSS.ELA-Literacy.SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
* **CCSS.ELA-Literacy.SL.2.3** Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

**Sticky Situation: Designing Walls**

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| **Grade Level:** Basic (Grades 1-2) with Advanced (Grades 3-5) Adaptations | | | |
| **Title:** Sticky Situation Designing Walls  **Topic: Materials Engineering** | **Lesson: Prep Lesson~ Technology in a Bag** | | **Focus Question:**  *What are technologies and who designs them?* |
| **Unit Learning Targets:**  Engineering, Technology and the Application of Science | | | |
| **Science and Engineering Practice**  P8 Obtaining, evaluating, and communicating information | | **Cross Cutting Concepts**  CCC 1 Patterns  CCC 6 Structure and Function | |
| **Time For Lesson:**  30-40 Minutes without Supports  50-60 Minutes with Migrant Supports | | | |
| **Content Objectives: *(Student Friendly)***  *I can identify everyday objects made by people as technology.*  *I can identify engineers as people who design objects to help people.* | | **Language Objectives:***(Throughout unit make sure all four language modalities, reading, writing, speaking and listening are addressed)*  *I can talk with my group to discuss why an object is a technology and discuss who creates these technologies.*  *I can write complete sentences to share my ideas about what an object can do and what problems that object solve.* | |

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| **Student Engagement: Leadership**  *I can work with other people in my group cooperatively by showing respect, making good decisions and solving problems.*   * Developing Relationships * Making Choices * http://lh4.ggpht.com/-PHpkg9D7Wrg/SVWO4cJ5leI/AAAAAAAAAbg/HcU9xpZrHyk/s640/IMG_0963.JPGSetting Goals * Problem Solving * Future Action Planning   *Students discuss in groups what an object does, who created that object and what problem the object solves.*  *(Discussion of how problems can be solved through technologies)*   * Prior to Preparatory prepare students to work in cooperative teams by using the GLAD Strategy of T-Chart of Social Skills- Set up groups, define cooperation * Utilize the strategy of Numbered Heads together * Utilize Super Scientist Awards | | | |
| **Key Vocabulary:**   * Engineering- * Engineer * Material * Problem * Technology * Solution | **Lesson Supports**  Super Engineer Awards  T-Chart of Social Skills  Number Spoons  *(Graphic Organizers, Adapted Texts, Notes, Photos, Charts, Realia)*  *Inquiry Chart*  *What is…*   |  |  | | --- | --- | | *An Engineer* | *Technology* | |  |  |   *Template Chart-With Questions* | | **Materials:**  *Brown Paper Bag*  *Materials from Pg. 33*  *Include materials from the migrant lifestyle*   * *Asparagus cutter* * *Trompo* * *Molcajete* * *Recipe card for traditional dish* * *Panuelo* |
| **Other Vocabulary:**  *List of objects in bags found on page 33. (Realia)* |
| **Higher Order Questions:**  What is an engineer?  What is technology?  Do you know someone who is an engineer? What kind of work do they do? | | **During Lesson:** Template/Chart…   * Is the object natural or human-made? * What is material(s) is it made of? * What problem does it solve? * How else could you use it? * What other materials could the object be made of? * Who do you think creates these technologies? | |

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| **Social and Cultural Processes:**  Adding migrant related realia during the Technology in a Bag activity. | | |
| **Building Background Activities**   * Introduction on pages 34-35 | | |
| **Comprehensible Input and Output**   * Charts-T Chart of Social Skills * Charts: Inquiry Chart * Realia-Items in Bag * EL Achieve Cards during student discussions-Specific Strategies- ***Share your Thinking Card*** | **Learning Strategies: Student Activities**  Student Notebooks  Learning Log-at the end of the notebook (write or sketch)  Charts | **Practice and Application:**  Discussion of realia in bags  Technology Around Us Worksheet P-1 |
| **Student Interaction**   * Discussion and Discourse of objects (EL Achieve Cards-Present and Idea… I think…, I noticed that… * Collaboration using “Leadership” team building using Social Skills and Number Heads. * Positive Interdependence | | |
| **Student Reflection**   * Return to the Inquiry Chart What is an Engineer-What is technology) (See page 37) * Realize that nearly everything we use is engineered, that we all engage in engineering… * How did you work in your group? | | |
| **Review and Assessment**   * A-1 and A-2 Prior to the Lesson- Place in notebook. At the end of the unit | | |
| **Parental Support Opportunities**  Home-School Connection: Take or draw a picture, or bring in real object of a “technology” found in the child’s home. Explain how it is used in the child’s home, explain what problem it solves, who created it.  Ask your parents the following question:   * What technology do you remember your parents (child’s grandparents) using? * How has the technology changed from your parents to your generation? | | |

**Sticky Situation: Designing Walls**

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| **Grade Level:** Basic (Grades 1-2) with Advanced (Grades 3-5) Adaptations | | | |
| **Title:** Sticky Situation Designing Walls  **Topic: Materials Engineering** | **Lesson: Lesson One**  **Yi-Min’s Great Wall** | | **Focus Question:**  What is a material? What are the properties of materials? What is a materials engineer? |
| **Unit Learning Targets:** *(Big Ideas Built Over Time)*  *Structure and Properties of Matter*  *Engineering Design Process* | | | |
| **Science and Engineering Practice** | | **Cross Cutting Concepts** | |
| **Time For Lesson:**  2-3 Class Periods 90- 120 Minutes without Migrant Supports  3 Class Periods 120-150 Minutes with Migrant Supports | | | |
| **Content Objectives:**  *I know that engineers solve problems by designing solutions.*  *I know the Engineering Design Process can help solve problems.*  *Materials have properties.*  *I know some materials are good choices for some things, but not good choices for other things.* | | **Language Objectives:**  *I can listen to a story that has a problem that will need to be solved.*  *I can read a story about a girl engineer, Yi Min.*  *I can talk about materials engineering.*  *I can write or sketch a short description of each step in the Engineering Design Process.* | |

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| **Student Engagement**   * Developing Relationships * Making Choices * Setting Goals * Problem Solving * Future Action Planning   Continue working on T-Graph of Social Skills- Add to the list what dos cooperation look like? What evidence have you seen? What does cooperation sound like? What evidence have you heard? Collect more ideas from the class.  ***“What does teamwork look like when you are having a discussion?” “What does it sound like?”*** |

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| **Key Vocabulary**  clay  design  engineer  Engineering Design Process  material  materials engineer  mixture  mortar  properties  solution  technology  structures | **Other Vocabulary:**  Ni hao  mooncake  Lao Shi  Yangtze  bamboo reeds  bandit  creativity  crumbled  detective  emperor  material  mortar  munch  seedlings | | **Lesson Supports**  *(Graphic Organizers, Adapted Texts, Notes, Photos, Charts, Realia)*   * Big Book of Engineers * Observation Charts | | **Materials:**  *(Science Lesson Specific Materials, test tubes, rocks)*   * Student handouts-Section One Basic or Advanced depending on grade level * Big Book * Observation Charts |
| **Higher Order Questions:**  (See Lesson Specific Questions Embedded within Lesson) | | | | | |
| **Social and Cultural Processes:**  Change Pre-Reading Questions to reflect the migrant lifestyle. Example…  Do you know someone who works on a farm? Describe the farm? What grows on the farm? | | | | | |
| **Building Background Activities**   * Observation charts-earth materials, farm technologies, engineers * Big Book of Engineers | | | | | |
| **Comprehensible Input and Output**   * Charts: Observation Charts * Charts: T-Graph of Social Skills * EL Achieve Cards during student discussions-Specific Strategies- ***Agree-Disagree Reflection Pg. 50*** | | **Learning Strategies: Student Activities**  Which Material Would you Choose Worksheet 1-5 Individually  Get into small group-decide which material/materials would make the best wall as a team. Create a larger picture of what would make the best wall-defend with the class  \*Could evolve into “Sticky Note and Language Scaffolds” Add/Revise/Question with sticky notes and discussion cards | | **Practice and Application:**  Engineering Design Process (1-6, 1-7)  Vocabulary: (1-8, 1-9) | |

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| **Student Interaction**   * Before reading Chapter Four students work in pairs to complete 1-5 or 1-4 * As a class make a list of materials Yi-min and Chen could use to build their wall-connect these with earth materials * Teams decide which materials would make the best walls through pictures/labels with the context of this challenge. (Small Group Models <http://tools4teachingscience.org/> ) |
| **Student Reflection**   * Reflection of student materials and reflection of empowerment as a result of the lesson |
| **Review and Assessment**   * Lesson One “What is a Materials Engineer” online assessments. Give A or B depending on age of student. |
| **Parental Support Opportunities**  Home School Connection: Adapt Student Sheet 1-10 to reflect construction in Mexico or other relevant culture. Ideas could be historical construction from their background or asking parents what their homes were constructed. |

**Sticky Situation: Designing Walls**

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| **Grade Level:** Basic (Grades 1-2) with Advanced (Grades 3-5) Adaptations | | | |
| **Title:** Sticky Situation Designing Walls  **Topic: Materials Engineering** | **Lesson 2: Materials and Their Uses** | | **Focus Question:**  *What makes a material a good or poor choice for a particular task?*   * Keeping Warm * Carrying Eggs * Sitting * Cleaning the Floor |
| **Unit Learning Targets:** *(Big Ideas Built Over Time)*  *Structure and Properties of Matter* | | | |
| **Science and Engineering Practice**  **P7** Engaging in argument from evidence | | **Cross Cutting Concepts**  CCC 6 Structure and function | |
| **Time For Lesson:**  Prep 5-10 Minutes  Lesson 50-60 minutes without enhancements  Lesson 2 days 40 minutes with enhancements | | | |
| **Content Objectives:**  ***(Student Friendly)***   * *I will learn that the same problem can be solved in many ways using different materials.* * *I will learn that materials have properties that make them good choices for certain uses and poor choices for other uses.* * *I will learn that material can be used in different ways to solve different problems.* | | **Language Objectives:**   * *I can speak to my partner about what material is the best choice for a particular problem and give reasons to support my answer.* * *I can write down a claim and back it up with evidence about why a particular material is best for solving a problem.* * *I can read Chapter Four to find the steps in the design process.* | |
| **Student Engagement**   * Developing Relationships * Making Choices * Setting Goals * Problem Solving * Future Action Planning   **Developing Relationships:** Continue working on T-Graph of Social Skills- Add to the list what does cooperation look like? What evidence have you seen? What does cooperation sound like? What evidence have you heard? Collect more ideas from the class.  ***“What does teamwork look like when you are having a discussion?” “What does it sound like?”***  Problem Solving: Students work in pairs. As students work in pairs think about how to solve a problem using different materials? | | | |

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| **Key Vocabulary:**  *Vocabulary Specifically Taught before, during or reinforced after instruction*   * *Criteria-give examples* * *Properties* * *Purpose* * *Use* | **Lesson Supports**  *(Graphic Organizers, Adapted Texts, Notes, Photos, Charts, Realia)*  Data Collection Chart for Class (2.9)  Graphic Organizer-Design Process Picture on page 21-Have that viewed when re-reading chapter 4 from Yi Min’s Great Wall  Think-Pair Share | **Materials: (Realia)**   * Cloth * Straw * Brick * Paper |
| **Other Vocabulary:**  ***Properties*** *is a similar to the word to characteristics****, qualities*** *or* ***attributes (in math).*** |
| **Higher Order Questions: (Model with first question-students will use the same process in pairs with a different question and same materials)**   * What could you make a with a cloth to help keep you warm? * What material is the blanket made of? * What are some properties of this material? * Which of those properties make this material a good choice for keeping warm? * Which material do you think would be best to use to keep warm? Why? * Let’s make a claim about how material could make you warm, then back this up with evidence. | | |
| **Social and Cultural Processes:**  During introduction- use the metal spoon and the t-shirt to discuss the properties of the object and the properties of the material. Also include objects from the migrant lifestyle in addition for more practice. Ideas could include-bandanas, asparagus cutters | | |
| **Building Background Activities**   * Read Three Little Havelinas (pigs) | | |
| **Comprehensible Input and Output**   * Charts: Observation Charts * Charts: T-Graph of Social Skills * EL Achieve Cards during student discussions-Specific Strategies- Cite Evidence (Change to reflect grade level) | **Learning Strategies: Student Activities**  Model process of Keeping Warm with four objects as a class   * Keeping Warm   Do worksheets 2-1 through 2-3 depending on age/level together | **Practice and Application:**  Work through other challenges in pairs…   * Carrying Eggs * Sitting * Cleaning the Floor |

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| **Student Interaction**   * Whole Group * Pairs * Individual reflections in notebooks |
| **Student Reflection**   * Go over all challenges regarding best materials for the job-class chart * Student Notebook- Claims, Evidence and Justification for materials type |
| **Review and Assessment**   * EiE Assessments-   + A/B-Multi Level   + A Advanced Level   + B Basic Level |
| **Parental Support Opportunities: Home School Connections**  Find several objects in your home. What properties does your object have? What properties does the material of the object have?  Ask parents about how they might have used the design process in their home. Draw the steps in solving a home problem that was solved through engineering, like grandpa. |

**Sticky Situation: Designing Walls**

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| **Grade Level:** Basic (Grades 1-2) with Advanced (Grades 3-5) Adaptations | | | |
| **Title:** Sticky Situation Designing Walls  **Topic: Materials Engineering** | **Lesson 3: Testing Mortar**  **Part One:** Wall Walk  **Part Two**: Testing Mortar  **Part Three:** Sticky Test and Earthquake Test | | **Focus Question:**  *Which earth materials make a good mortar that is sticky (adhesive) and durable?* |
| **Unit Learning Targets:** *(Big Ideas Built Over Time)*  *Structure and Properties of Matter*  Engineering, Technology and the Application of Science | | | |
| **Science and Engineering Practice**  P1 Asking questions and defining problems  P2 Developing and using a model  P3 Planning and carrying out investigations  P4 Analyzing and interpreting data  P8 Obtaining, evaluating and communicating information | | **Cross Cutting Concepts**  CCC 2 Cause and effect  CCC 6 Structure and function | |
| **Time For Lesson:**  Part 1: Prep 5 minutes- Lesson 20-30 minutes w/o enhancements 30-40 minutes w/ enhancements  Part 2: Prep 15-20 minutes- Lesson 50-60 minutes w/o enhancements 40 minutes over 2 days w/ enhancements  Part 3: Prep 5 minutes- Lesson 40 minutes w/o enhancements 50-60 minutes w/ enhancements | | | |
| **Content Objectives:**   1. I can analyze the properties of earth materials to make the strongest mortar. 2. I can gather evidence to begin t 3. I can compare the results of a controlled investigation. | | **Language Objectives:**   1. I can discuss with my partner the features of different walls. 2. I can listen to the ideas my partner has about which earth material will make the best mortar. 3. I can record the properties of dry and wet earth materials. | |
| **Student Engagement**   * Developing Relationships * Making Choices * Setting Goals * Problem Solving * Future Action Planning   Students begin the design process by asking a question of which material makes the best mortar. Students conduct a fair/controlled investigation to determine an answer for two specific tests. After looking at the results, students will see the properties of the three soil types do not make good mortars and will be asked to develop ideas to make a stronger mortar by mixing soils types together. | | | |

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| **Key Vocabulary:**  *durability*  *experiment*  *mixture*  *mortar*  *particle*  *predict*  *property*  *test* | **Lesson Supports**  Here are four graphic organizers to be used when working on the skill of comparing and contrasting.* Box and T-Chart for two items* Box and T...*Lesson Part One: Use a box and t chart to show the similarities and differences of different walls students observed.* | **Materials:**  *(Science Lesson Specific Materials, test tubes, rocks)*  *See materials list on page 75*  *Buckets of soapy water for clean up*  *Preparation notes specifically tell how to set up materials for lesson. Overnight drying of mortar is required between Part 2 and 3 of this lesson.* |
| **Other Vocabulary:**  *adhesive-stickiness*  *adhesion tests (advanced)*  *failure (testing to the point of…)* |

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| **Higher Order Questions:**   * *How are these walls the same? How are the walls different?* (Looking at walls) * *What do you think mortar is used for? Do you have any guesses as to what materials are used to make mortar?* (Design and construct own wall) * *What are some* ***properties*** *that you think a good mortar should have*? * *How do you think we could test our mortar sandwiches to determine if soil, sand and clay have properties that make a good mortar*? * *Why do engineers test to the point of failure*? | | |
| **Social and Cultural Processes:**  Show pictures of walls, with and without mortar from students’ backgrounds. | | |
| **Building Background Activities**   * Wall Walk (Part One) Looking different walls thinking about how they are the same and different and how their structure is made to support a specific purpose. (Students will look at four walls on their walk sketching and making notes regarding the features of each wall * Work with samples of soil, sand and clay. | | |
| **Comprehensible Input and Output**  Chart with properties of good mortar-with revisions throughout lesson | **Learning Strategies:**  Model with Student Sheet 3.2 and 3.3 properties of dry and wet soil. | **Practice and Application:**  Students work either individually or in groups to add to their student sheets for the properties of sand and clay. |
| **Student Interaction**   * Students work in pairs to describe properties of earth materials- * Students work in pairs to complete both sticky test and earthquake tests * Students share results of tests to the class. | | |
| **Student Reflection**   * See guiding questions on page 89 * Reflect on the properties students learned about dry and wet earth materials * Reflect on how the lesson they completed relates to the field of materials engineering. | | |
| **Review and Assessment**   * Student Rubric for the following areas:   + Observations of walls, describing properties of earth materials, making predictions, analyzing’s results of mortar and comparing results of controlled experiment (3-8 and 3-9) | | |
| **Parental Support Opportunities:** *Home School Connections*  Draw a wall from your home either inside or outside. What is the purpose of the wall? What is the wall made out of? How does your wall stay up?  What are earth materials near your home that could be used for mortar? | | |

**Sticky Situation: Designing Walls**

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| **Grade Level:** Basic (Grades 1-2) with Advanced (Grades 3-5) Adaptations | | | | |
| **Title:** Sticky Situation Designing Walls  **Topic: Materials Engineering** | **Lesson 4-Designing a Wall**  **Part One:** Ask/Imagine and Plan  **Part Two:** Create  **Part Three:** Create and Improve  **Part Four:** Improve | | | **Focus Question:**  *How can we use the Engineering Design Process to design a wall using rocks and a mortar make of a mixture of earth materials?* |
| **Unit Learning Targets:** *(Big Ideas Built Over Time)*  *Structure and Properties of Matter*  Engineering, Technology and the Application of Science | | | | |
| **Science and Engineering Practice**  P1 Asking questions and defining problems  P2 Developing and using a model  P3 Planning and carrying out investigations  P4 Analyzing and interpreting data  P6 Constructing explanations and designing solutions  P7 Engaging in argument from evidence  P8 Obtaining, evaluating and communicating information | | | **Cross Cutting Concepts**  CCC 2 Cause and effect  CCC 4 Systems and system models  CCC 6 Structure and function | |
| **Unit Learning Targets:** *(Big Ideas Built Over Time)* | | | | |
| **Science and Engineering Practice** | | | **Cross Cutting Concepts** | |
| **Time For Lesson:**  **Part One:** Ask, Imagine, Plan- 50 Minutes  **Part Two**: Create- 50 Minutes  **\*\*\* Allow 24-48 hours between Parts Two and Three \*\*\***  **Part Three:** Create, Improve- 60 Minutes  **Part Four:** Improve 60 Minutes | | | | |
| **Content Objectives:**  *I can use the engineering design process to solve a problem.*  *I can analyze the strengths and weakness of my design and make improvements.* | | **Language Objectives:**  *I can read Yi Min’s Great Wall and compare what I did with what Yi Min did to solve a problem*.  *(Throughout unit make sure all four language modalities, reading, writing, speaking and listening are addressed)* | | |

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| **Student Engagement**   * Developing Relationships * Making Choices * Setting Goals * Problem Solving * Future Action Planning   Based on what students learned in lesson three, students will be asked to work together to create a mortar that will enable a wall to be more structurally sound. Students will need to make action plans of how their walls will look and other earth materials to strengthen mortar. In the final part of Lesson 4 students will be asked to optimize their mortars by redesign their mortars with other earth materials. These lessons lend themselves to connect with planning ahead in other areas of school and home. | | | |
| **Key Vocabulary:**  *demolition*  *design*  *engineering design process*  *goal*  *mortar*  *predict*  *problem*  *redesign*  *teamwork*  *test* | **Lesson Supports**  *Part 1:*  *Activity 10 tells students that they will get 20 rocks and the walls should be around 3” tall. Point out that these are* ***constraints*** *that engineers work within.*  *Part 2 and 3: Sentence Frames or Observational Organizer in science notebooks*  *I noticed…*  *I observed…*  *When the….*  *Part 4: Use claims and evidence to answer the following: “Did the redesign of the mortar strengthen the wall?* | | **Materials:**  Lesson materials for each section…  Cleaning supplies  resealable containers to hold earth materials  Create a Demolition Ball Assembly-See handout 4-10  See Videos on Engineering is Elementary Website-  http://www.eie.org/classroom\_video/unit/earth-materials |
| **Other Vocabulary:**  *constraints-*  *optimize-Lesson 4 with materials outside unit soil types such as twigs and hay.* |
| **Higher Order Questions:**  (See Lesson Specific Questions Embedded within Lesson) | | | |
| **Social and Cultural Processes:** | | | |
| Building Background Activities   * Review Yi Min’s Great Wall (Have students go back through story or pictures to review the engineering design process * Review the steps in the design process and ask what step in the process did we do in Lesson 3? (Page 99) | | | |
| **Comprehensible Input and Output :**  Use student sheets to create booklet for students using the design process- Student sheets for ask, imagine, plan, create and improve | **Learning Strategies:**  Part 1: Demonstrate a new mixture for mortar and have students analyze if that would be a good mixture. (Page 101) | **Practice and Application:**  Part 1: Students create their own mixture based on what they have learned. | |

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| **Student Interaction**   * Students work in pairs to decide what mixture of soil types they will use to make a stronger mortar. * Students work in teams to go through the design process. * Students share results of tests to the class. |
| |  |  | | --- | --- | | Building a Wall | | | What worked well… | What were some challenges… | |  |  |   **Student Reflection**   * Part 2: Use a t chart to reflect on the building of the wall. * Part 3: Use sentence frames or observational organizer to bring out ideas how their walls reacted to the demolition test. * Part 4: Refection Questions on page 120. |
| **Review and Assessment**   * Administer the Pre-Post Test within the Engineering is Elementary Unit in the Assessment Tab |
| **Parental Support Opportunities:** Home School Connection  With your family describe a problem that had to be solved using the design process. Examples include how to make a special family recipe. How did you find ways to make the “system of making something” go more smoothly, or faster? |